

Amendments to the Claims

Please amend the claims as shown in the Listing of Claims below. This listing of claims will replace all prior versions, and listing, of claims in the application.

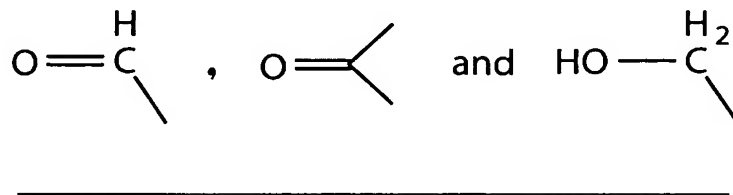
LISTING OF CLAIMS

Claims 1 to 21: (canceled)

Claim 22. (previously presented): A method for immobilising a desired molecule on a silicon substrate, the method comprising the steps:

- (A) providing an Si-H surface on the silicon substrate;
- (B) optionally reacting the Si-H surface with a linker-molecule possessing at least one anchor functionality capable of reacting with the Si-H surface to form an Si-C or Si-O linkage, and further possessing at least one coupling group and/or protected coupling group which does not react with the Si-H surface;
- (C) removing unreacted linker-molecule, if used;
- (D) if a protected coupling group is present, deprotecting the protected coupling group; and
- (E) reacting the coupling group with the desired molecule; or
- (F) reacting the Si-H surface with the desired molecule which possesses at least one anchor functionality capable of reacting with the Si-H surface to form an Si-C or Si-O linkage;

wherein the functionality capable of reacting with the Si-H surface is selected from the group consisting of



Claims 23 to 25: (canceled)

Claim 26. (Original): The method of claim 22, wherein step (B) or step (F) is carried out thermally.

Claim 27. (Original): The method of claim 22, wherein step (B) or step (F) is carried out photochemically.

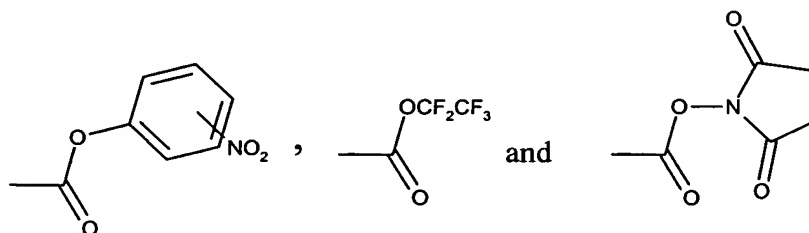
Claim 28. (Original): The method of claim 22, wherein the coupling group is selected from the group consisting of

- a group capable of reacting with a thiol to form a thioester linkage;
- a group capable of reacting with an amine to form an amide linkage; and
- a group capable of reacting with an alcohol, to form an ester linkage.

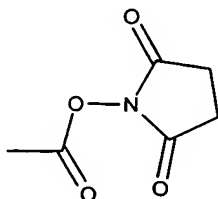
Claim 29. (Original): The method of claim 22, wherein the coupling group is a carboxyl group.

Claim 30. (previously presented): The method of claim 22, wherein the coupling group is an activated carboxyl group.

Claim 31. (Original): The method of claim 22, wherein the coupling group is selected from the group consisting of:



Claim 32. (Original): The method of claim 22, wherein the coupling group is:



Claim 33. (Original): The method of claim 22, wherein the desired molecule is selected from an RNA, a DNA, a protein, a carbohydrate, and conjugates of these molecules.

Claim 34. (Original): The method of claim 22, wherein the desired molecule is a DNA.

Claim 35. (Original): The method of claim 22, wherein the desired molecule is an antibody.

Claim 36. (Original): The method of claim 22, wherein the silicon substrate is porous silicon.

Claim 37. (Original): A modified silicon substrate bearing on its surface a desired molecule attached via an Si-C or Si-O bond.

Claim 38. (Original): The modified silicon substrate of claim 37, which is porous silicon.

Claim 39. (Original): The modified silicon substrate of claim 37, which is Si(100) or Si(111).

Claim 40. (Original): The modified silicon substrate of claim 37, wherein the desired molecule is attached via an Si-C bond.

Claim 41. (Original): The modified silicon substrate of claim 37, wherein the desired molecule is selected from the group consisting of an RNA, a DNA, a protein, a carbohydrate, and conjugates of these molecules.

Claim 42. (Original): The modified substrate of claim 37, wherein the desired molecule is a DNA.

Claim 43. (Original): The modified substrate of claim 37, wherein the desired molecule is an antibody.

Claims 44 to 52: (canceled).